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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/647,021	09/26/2000	Rolf Block	P00,0703	2927

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EXAMINER

USTARIS, JOSEPH G

ART UNIT PAPER NUMBER

2611

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,021

Applicant(s)

BLOCK, ROLF

Examiner

Joseph G Ustaris

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grant (4,413,229) in view of Shimp (4,072,899) and Franchville et al. (US006278485B1).

Regarding claim 8, Grant discloses a method and apparatus for quickly locating and correcting equipment malfunctions or faults within a CATV network. Grant utilizes a remote indication fault locating equipment (RIFLE), which inserts a predetermined fault locator signal frequency or "first signal having a first frequency" that is modulated to a particular tone or "first sound signal having a first sound frequency" when a fault is suspected (See column 1 line 65 – column 2 line 16). Grant discloses that the RIFLE frequency signal can be placed in various positions within the RF spectrum, i.e. between 175-220 MHz (See Fig. 4 element 52). A user guides a receiver along the coaxial transmission system or "coaxial cable", where the receiver reproduces the fault tone to help determine where the fault is located in the coaxial transmission system or "determining a region" (See column 3 lines 20-40). However, Grant lacks a method for locating defective shielding of a coaxial cable by using a secondary tone positioned at a higher frequency than the RIFLE frequency signal.

Grant suggests the capability of a two frequency system wherein RF leak detectors can be used to detect the RIFLE frequency signal and a RF leak test frequency signal (See column 3 lines 40-65). Shimp discloses an RF leak detector or receiver that detects and locates RF leakage due to defects in shielding (See column 1 lines 5-30). A transmitter installed at the head end transmits a unique signal using a unique audio tone or "second signal having a second sound signal at a second sound frequency different than the first". The RF leak detector will emit the unique audio tone when a RF leak is detected and located along the cable or "second sound signal for determining position of defective shielding" (See column 1 lines 30-51 and column 2 lines 20-30). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the RIFLE system disclosed by Grant to use an additional tone or second tone for locating defective shielding by detecting RF leakage, as taught by Shimp, in order to provide more precise measurements and reliability when locating faults in the system.

Franchville et al. (Franchville) discloses a system for testing a CATV distribution network to ensure high quality signals. The system sends a test signal at various frequencies including the upper transmission range, i.e. 414.2 MHz (See column 5 lines 9-15 and lines 47-55). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the second tone disclosed by Shimp to be placed in the upper transmission range, as taught by Franchville, in order to prevent interference with TV, service, and RIFLE frequencies.

Regarding claim 9, the RILFE frequency signal can be located in various positions in the downstream direction, in particular between 175-220 MHz or "in a range of 100 to 200 MHz" and the second tone is located in the upper transmission range, i.e. 414.2 MHz, as discussed in claim 8.

Regarding claim 10, the second tone or "second frequency" has a unique audio tone or "value" in order to aid in detecting and locating the RF leak due to defects in shielding (See Shimp column 1 lines 35-51).

Regarding claim 11, the coaxial transmission system is used in a CATV network or "television distribution network", wherein inherently the television signals are in the range of 50 to 1000 MHz (See Grant column 1 lines 5-25). Furthermore, the second tone is located in the upper transmission range, i.e. 414.2 MHz or "400 to 500 MHz", as discussed in claim 8.

Regarding claim 12, Grant discloses that an RF receiver modified to receive two frequencies can be used, wherein inherently the RIFLE frequency signal and second tone have unique audio tones or "values" such that an FM radio or "amateur radio" can receive and output the signals (See Grant column 3 lines 40-64 and Shimp column 1 lines 35-51).

Regarding claim 13, inherently the transmission levels of the signals match that of the receiver in order for the receiver to receive the RIFLE frequency signal and second tone.

Regarding claim 15, Official Notice is taken that it is well known to attenuate received signals within a receiver. Therefore, it would have been obvious to one with

ordinary skill in the art at the time the invention was made to modify the receiver disclosed by Grant in view of Shimp and Franchville to attenuate the received signals in order to provide a means for controlling the received signal level thereby giving the user a means to control the volume of the received sound signal.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grant (4,413,229) in view of Shimp (4,072,899) and Franchville et al. (US006278485B1) as applied to claim 8-13, and 15 above, and further in view of Doyle et al. (US006374095B1).

Grant in view of Shimp and Franchville lack a feature where the system has an integrated "sub audio squelch" method.

Doyle et al. (Doyle) discloses a method and apparatus for providing a squelch function on narrow band radio receivers. The system transmits a low frequency (sub-audible) FM tone with a desired signal. When the receiver detects a signal with the FM tone, the audio of that signal will be outputted. On the other hand, the audio of the signal will not be outputted if there is no FM tone (See column 1 lines 40-50 and column 2 lines 45-65). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system disclosed by Grant in view of Shimp and Franchville to include a squelch function, as taught by Doyle, in order to enhance the reliability of the receiver by only allowing desired tones to be outputted by the receiver.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please take note of the following references for their similar methods of detecting RF leakage within a coaxial cable.

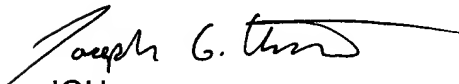
Reference:


- Bowyer et al. (US006307593B1)
- Kallina (US006005518A)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Ustaris whose telephone number is (703) 305-0377. The examiner can normally be reached on Monday-Friday with alternate Fridays off from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile, can be reached on (703) 305-4380. The fax phone number for this Group is (703) 872-9306.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703) 305-4700.


JGU
April 27, 2004


VIVEK SRIVASTAVA
PRIMARY EXAMINER